

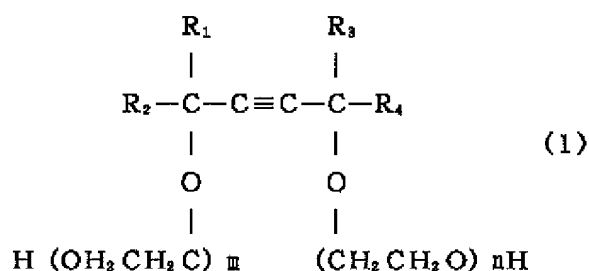
Publication number 2002-293001

INK JET RECORDING SHEET

[Claim(s)]

[Claim 1] In an ink jet recording sheet in which double-sided printing which established an ink absorbing layer which uses a white pigment as the main ingredients in both sides of sheet shaped support which inner-**(ed) calcination kaolin is possible, An ink jet recording sheet in which double-sided printing which carries out simultaneous coating of the acetylene glycol derivative expressed with a following general formula (1) to ink absorbing layer both sides, and is characterized by things is possible.

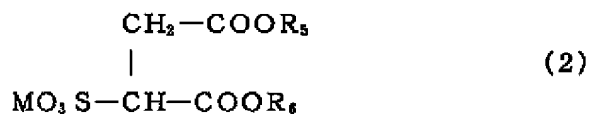
[Formula 1]



[R₁ · R₄ express the alkyl group of the carbon numbers 1-4 among a general formula (1). 3-30 m+n= ethyleneoxide addition mols are expressed.]

[Claim 2] In an ink jet recording sheet in which double-sided printing which established an ink absorbing layer which uses a white pigment as the main ingredients in both sides of sheet shaped support which inner-**(ed) calcination kaolin is possible, An ink jet recording sheet in which double-sided printing which carries out simultaneous coating of the dialkyl sulfosuccinic acid alkali metal salt expressed with a following general formula (2) to ink absorbing layer both sides, and is characterized by things is possible.

[Formula 2]



[R₅ and R₆ express the alkyl group of the carbon numbers 4-12 among a general formula (2). M expresses the alkali metal salt of lithium, sodium, and potassium.]

[Detailed Description of the Invention]

[0001]

[The technical field belonging to an invention] Concerning the record sheet which uses this invention for the ink jet recording method which used the water-based ink, there are no set-off and printing nonuniformity of a printing image, and it is related with the high-definition ink jet recording sheet in which the double-sided printing excellent in ink absorbency and picture clear nature is possible.

[0002]

[Description of the Prior Art]It has become possible to acquire a clear picture and printing quality as an ink jet recording sheet in recent years using a regular paper by the performance of the printer of the inkjet method using a water-based ink, and improvement of ink. However, in order to make still more attractive printing quality, chroma saturation, appearance, and a picture by one side, An ink jet recording sheet with the more advanced characteristic is required, and especially The printing speed of a printer, Improvement in resolution, chroma saturation, etc. was achieved, the advanced printing characteristics, such as high ink absorbency, high ink absorption capacity, and dot perfect circle nature, came to be required also from the ink jet recording sheet, and the coated paper which established the ink absorbing layer in the base material like paper was developed.

[0003]. For example, provide the ink absorbing layer containing non-colloid silica and a macromolecular binding agent on a base paper at JP,55-51583,A. Or by establishing the ink absorbing layer used as a water soluble polymer binder including silica system paints with a mean particle diameter of 0.05 micrometer or less in a 58-72495 gazette, if the ink jet recording sheet excellent in ink absorbency, dot perfect circle nature, and clear nature is obtained, it is indicated. That is, in order to accept a demand of a commercial scene, the coating layer which uses the white pigment excellent in absorptivity like particle composition silica as the main ingredients is provided in the surface of the base material like the paper which uses cellulose pulp as the main ingredients. The ink jet recording sheet of the type which uses especially a coating layer and paper as a base paper has cost, aesthetic property, and good quality balance, and is expected as a future ink jet recording sheet.

[0004]On the other hand, since it is not necessary to engrave unlike printing, ink jet recording can be printed in small quantities, and has an advantage of ease. The advertising matter mainly concerned with printing from documents for offices, such as documents, with use expansion of an ink jet printer or a plotter, It is especially

expanded as a use of mail, such as a use as point-of-purchase advertisement (it is called Point of PurchaseAdvertising and following POP), direct mail, a common postcard, a business card, etc. When the use of point of purchase advertising, a postcard, a business card, etc., etc. was expanded, the ink jet recording sheet in which double-sided printing is possible was required and developed from the inkjet printing paper for one side printing used for the conventional office document etc. For example, the record sheet in which the ink absorbing layer was formed to both sides of the paper base is indicated by JP,56-148584,A and JP,2-270588,A.

[0005]

[Problem(s) to be Solved by the Invention]If an effect is checked by this invention person's further experiment, although double-sided printing is possible, when double-sided printing of these ink jet recording sheets is carried out, the ink of one side oozes out to another field, and is not practical (strike-through). How of the picture printed in one side for point of purchase advertising, the postcard, and the business-card use to be visible from another field and able to read (set-off) is insufficient practical. There is the method of inner-**(ing) a titanium dioxide, calcium carbonate, calcination kaolin, etc. which increase the coating amount of an ink absorbing layer and which enlarge thickness of paper or can be used as an inner loading material with high opacity to the base material like paper as the measure against a set-off. Although it is calcination kaolin especially preferably, since ink absorption capacity is larger than cellulose pulp, printing nonuniformity generates calcination kaolin, and the ink jet recording sheet in which high-definition double-sided printing is possible is not obtained. Therefore, it is there being no set-off and printing nonuniformity of a printing image of an ink jet recording sheet which use the sheet shaped support in which the purpose of this invention inner-**(ed) calcination kaolin, excelling in ink absorbency and picture clear nature, and providing the high-definition ink jet recording sheet in which double-sided printing is possible.

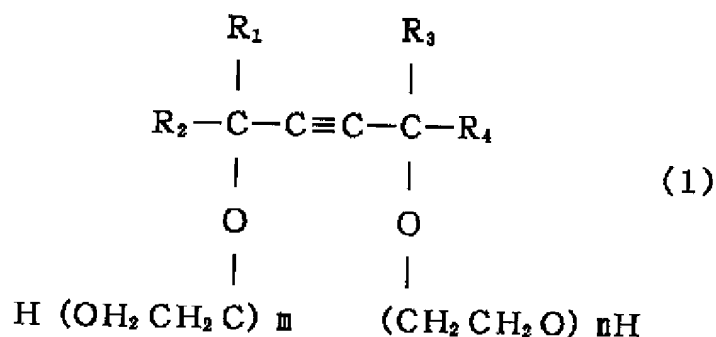
[0006]

[Means for Solving the Problem]In an ink jet recording sheet in which double-sided printing which established an ink absorbing layer which uses a white pigment as the main ingredients in both sides of sheet shaped support which inner-**(ed) calcination kaolin as a result of this invention person's advancing extensive research and an experiment wholeheartedly is possible, The purpose resulted in this invention with knowledge of being attained, by carrying out simultaneous coating of an acetylene glycol derivative expressed with a following general formula (1) to ink absorbing layer both sides, or the dialkyl sulfosuccinic acid alkali metal salt expressed with a following

general formula (2).

[0007]

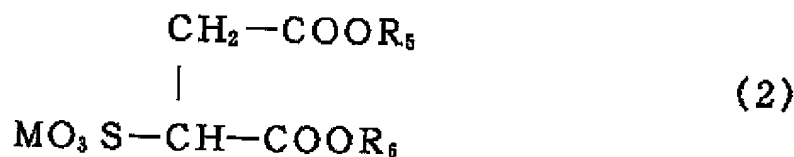
[Formula 3]



[0008] $R_1 - R_4$ express the alkyl group of the carbon numbers 1-4 among a general formula (1). 3-30 $m+n$ = ethyleneoxide addition mols are expressed.

[0009]

[Formula 4]



[0010] R_5 and R_6 express the alkyl group of the carbon numbers 4-12 among a general formula (2). M expresses the alkali metal salt of lithium, sodium, and potassium.]

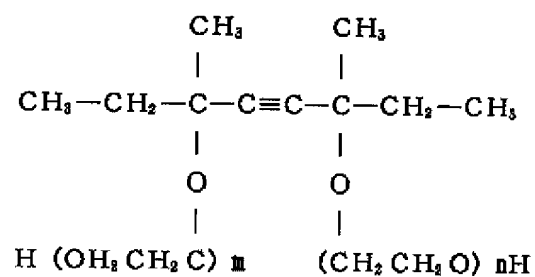
[0011] That is, by carrying out simultaneous coating of an acetylene glycol derivative or dialkyl sulfo sodium succinate of this invention to ink absorbing layer both sides, there is no printing nonuniformity, ink absorbency also improved sharply, and a high-definition picture without a picture blot was acquired.

[0012]

[Embodiment of the Invention] As an acetylene glycol derivative expressed with the above-mentioned general formula (1) used for this invention, the following can be mentioned, for example.

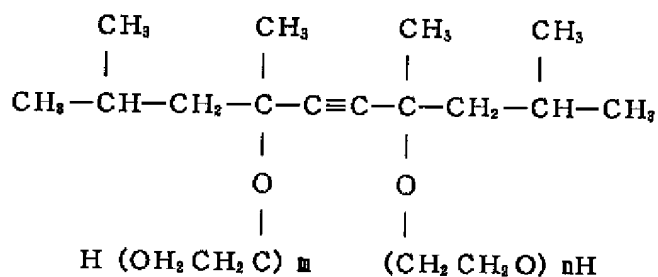
[0013]

[Formula 5]



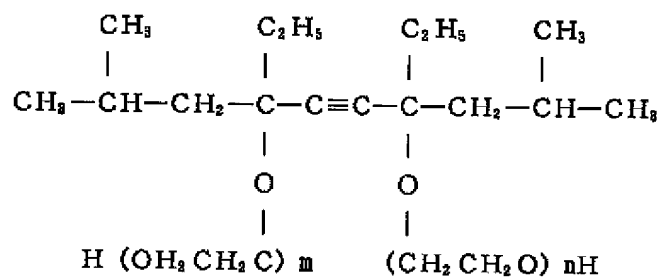
[0014]

[Formula 6]



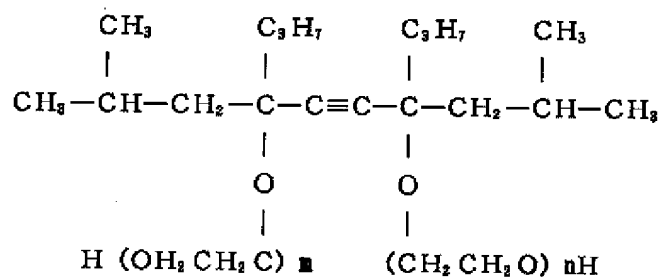
[0015]

[Formula 7]



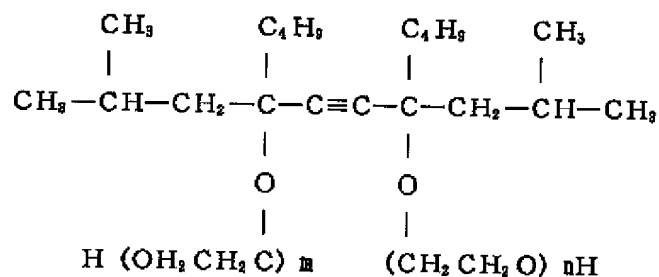
[0016]

[Formula 8]



[0017]

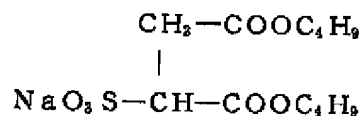
[Formula 9]



[0018] Generally sodium salt is marketed, for example, the dialkyl sulfosuccinic acid alkali metal salt expressed with the above-mentioned general formula (2) used for this invention can mention the following.

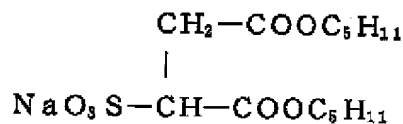
[0019]

[Formula 10]



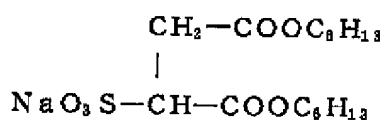
[0020]

[Formula 11]



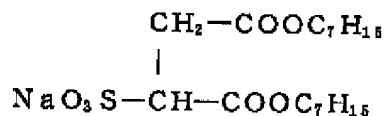
[0021]

[Formula 12]



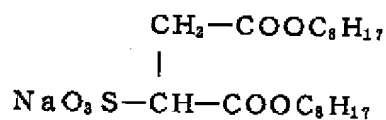
[0022]

[Formula 13]



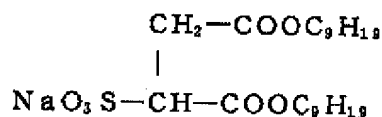
[0023]

[Formula 14]



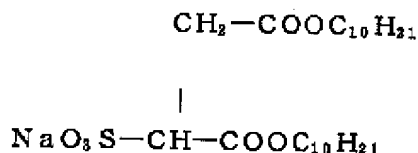
[0024]

[Formula 15]



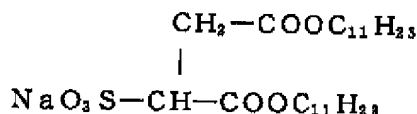
[0025]

[Formula 16]



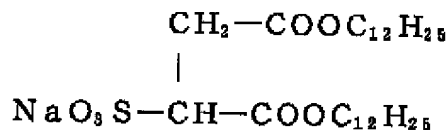
[0026]

[Formula 17]



[0027]

[Formula 18]



[0028]The acetylene glycol derivative expressed with the general formula (1) used for this invention, Each dialkyl sulfosuccinic acid alkali metal salt expressed with a general formula (2) is accomplished with solution, A BIRUBUREDO coating machine, gate roll coater, a transfer roll coater, With coating methods, such as size press, to these ink absorbing layer both sides, coating and desiccation of are done so that it may become 0.2-2g/[m]² preferably especially, and a double-sided coating amount obtains 0.1 · 4 g/m² (dry weight solid content) and the ink jet recording sheet in which double-sided printing is possible. the ink absorbing layer of this invention -- high -- although it becomes a smooth surface condition, in order to obtain one step of outstanding recorded image more, it is preferred to process with smoothing apparatus, such as a super calender and a soft calendar.

[0029]Acid paper for coated paper with common sheet shaped support used for this invention, alkaline paper, etc. are used suitably. Although sheet shaped support is constituted considering wood pulp as the main ingredients, calcination kaolin is inner-**(ed) in order to aim at opaque improvement. Wood pulp is various chemical pulp, mechanical pulp, regenerated pulp, etc., and these pulp adjusts a degree of beating (freeness) with beater, in order to maintain ink jet recording suitability, such as

paper-making fitness, coating fitness and also ink absorbency, and a record surface condition. Generally a degree of beating of pulp is 300-500 ml, although it changes with kinds of pulp and does not limit in particular. [Canadian standard freeness (henceforth CSF): JIS P-8121] is preferred. A whiteness degree of 90 to 92% and particle diameter of 2 micrometers or less of calcination kaolin used for this invention are 90%, 90-oil absorption 110g/100g, and specific surface area 18-19m²/g, and inner ***** is five to 30 weight section to pulp 100 weight section, and is ten to 20 weight section preferably.

[0030]A sizing compound, a paper reinforcing agent, a yield improver, etc. are added as an auxiliary agent, and also it does coating and being impregnated of water soluble polymers, such as starch, in a size press process of a paper machine, and surface intensity, the degree of size, etc. are adjusted. Although basis weight of sheet shaped support milled is 40 - 350 g/m² and the degree of size changes with basis weight, It will be a range for 1 to 250 seconds in Stockigt sizing degree, if the degree of size is low, it will become an operation top problem by slip of paper at the time of coating, a wrinkle, etc., and if the degree of size is high, absorptivity will be inferior and a blot will occur.

[0031]As a white pigment of an ink absorbing layer used for this invention, For example, talc, kaolin, calcination kaolin, an acid earth, activated clay, calcium carbonate, Magnesium carbonate, calcium sulfate, barium sulfate, a titanium dioxide, A zinc oxide, zinc sulfide, zinc carbonate, a satin white, aluminum silicate, A calcium silicate, a magnesium silicate, aluminium hydroxide, synthetic amorphous silica, Colloidal silica, colloidal alumina, alumina, lithopone, zeolite, inorganic system white pigment [, such as hydrated halloysite,]; -- organic system white pigments, such as plastic pigments, such as polyethylene, polystyrene, and polyacrylate, urea resin, and melamine resin, are mentioned -- one sort -- or although two or more sorts use it, mixing, it is synthetic amorphous silica especially preferably. Although sodium pyrophosphate, hexametaphosphoric acid sodium, sodium tripolyphosphate, sodium polyacrylate, sodium hydroxide, a sodium silicate, etc. are mentioned, a dispersing agent of synthetic amorphous silica used by this invention, They are sodium polyacrylate, sodium hydroxide, and a sodium silicate preferably.

[0032]In this invention, in order to paste up sheet shaped support and a white pigment, adhesives are contained. As adhesives used for this invention, for example Starch, casein, soybean protein, Nature or semisynthesis water soluble polymers, such as gelatin, carboxymethyl cellulose, and hydroxyethyl cellulose; Polyvinyl alcohol, Water soluble polymers, such as silanol denaturation polyvinyl alcohol and its derivative; A styrene butadiene copolymer, vinyl system polymer latex, such as conjugated diene system polymer latex, such as a methylmetaacrylate butadiene copolymer, and an

ethylene-vinyl acetate copolymer, is mentioned -- one sort -- or two or more sorts use it, mixing.

[0033]In this invention, in order to aim at weatherproof improvement in a printing image, a cationic ink fixing agent is contained in an ink absorbing layer. As a cationic ink fixing agent used for this invention, For example, a copolymer of dimethyldiaryl ammoniumchloride and acrylamide, (meta-) a polymer of the 4th class ammonium ghost or the 4th class ammonium ghost of alkyl acrylate or (meta-) acrylic acid amide alkyl -- more than 50 mol % -- a copolymer to contain. Acrylamide acrylonitrile, N-vinylacrylic amidine hydrochloride, N-vinylacrylamide vinyl amine salt acid chloride, and N-vinylformamide copolymer, A dimethylamine epichlorohydrin polycondensation body, a polyethylene polyamine dimethylamine epichlorohydrin polycondensation body, an acrylamide diaryl amine copolymer, etc. are mentioned.

[0034]In this invention, on a clear disposition of much more printing image, in order to acquire a high-definition picture, a fluorescent brightener and a dot regulator are mixed to an ink absorbing layer. As a fluorescent brightener, for example A pyrene derivative, a coumarin derivative, an amino coumarin derivative, A KAPO styryl derivative, a dibenzo oxazolyl derivative, a thiazole derivative, Although an imidazole derivative, a benzimidazole derivative, an imidazoline derivative, a pyrazoline derivative, a benzidine derivative, a stilbene derivative, a JISUCHIRUBEN derivative, a disulfon acid derivative, a NAFUTARU imide derivative, a distyrylbiphenyl derivative, etc. are mentioned, It is a disulfon acid derivative especially preferably, Specifically The FURUO loess cent 85, the FURUO loess cent 86, the FURUO loess cent 90, the 4,4'-bis[2-sodium sulfanil 4-JI (hydroxyethyl) amino-1,3,5-thoriadiny] (6)-amino] stilbene 2, It is 2'-disulfon acid sodium.

[0035]As a dot regulator, for example A strengthening rosin size agent, a petroleum resin system sizing compound, Various latex used with reactant sizing compounds, such as an emulsion sizing compound and an alkenyl succinic anhydride, a self fixing type cationic resin size agent, a wax emulsion, silicon, or adhesives is mentioned. In this invention, by request, Benz imidazolyl carbamic acid methyl ester, Add antiseptics, such as allylmethanol mono (poly) hemi FOMARU, suitably, and it accomplishes with coating liquid for ink absorbing layers, A braid coating machine, an air knife coater, a curtain coating machine, a bar coating machine, A coating amount of one of the two's field so that it may become sheet shaped support with $3 - 30 \text{ g/m}^2$ (dry weight solid content) with coating methods, such as a photogravure coating machine and a roll coater, after coating and desiccation, Coating and desiccation of were done and an ink absorbing layer was established in both sides so that a coating amount might serve as $3 - 30 \text{ g/m}^2$

(dry weight solid content) in another field.

[0036]

[Example] Hereafter, the most typical example explains the suitable mode and the outstanding effect of this invention concretely. Below all parts are weight sections and all % are weight %.

[0037]

[Production of a base material]

10 copies of 90 copies of LBKP(s)(CSF350ml) NBKP(s) (CSF350ml) calcination kaolin (92% of a whiteness degree) The particle diameter of 90% of 2 micrometers or less, the oil absorption of 110g/20 copies of 100g50% rosin size emulsion 3.4-copy 50% sulfuric acid band solution 4.2-copy polyacrylamide fluid 0.005-copy both sexes starch Two copies[0038] After milling the 1% slurry of the above-mentioned combination, size press was performed so that it might become double-sided coating weight 0.5 g/m² (dry weight solid content) in oxidized starch (Japan Maize Products make: MS-3800) solution 3%, and the base material of basis weight 200 g/m² was obtained.

[0039]

[Production of an ink absorbing layer]

40% sodium polyacrylate solution (the product made from the Toagosei chemical industry: T-40)

1.5-copy noncrystalline-synthetic-silica powder (Tokuyama: -- fine seal X-37B.) mean-particle-diameter 3.7micrometer 70 copy noncrystalline-synthetic-silica powder (Mizusawa Industrial Chemicals: -- Ms. KASHIRU P-78D.) mean-particle-diameter 7.5micrometer 30 copy silica distribution service water . a 454-copy 25% FURUO loess cent 90 ten-copy solution [10%] silanol denaturation PVA solution (Kuraray: -- R-1130.) Degree-of-polymerization 1700 and degree % of 98.5 mol of saponification. 30% solution of 280 copy acrylamide acrylonitrile, N-vinylacrylic amidine hydrochloride, N-vinylacrylamide vinyl amine salt acid chloride, and N-vinylformamide copolymer 70-copy 55% ethylene and a vinyl acetate copolymer emulsion. (Sumitomo Chemical make: SUMIKA flex time S400) 18 copies[0040] The above-mentioned combination was used as the coating liquid for ink absorbing layers. A coating amount this coating liquid so that it may become one side of the base material of basis weight [of 200g/m] ² obtained above with 7.5g/[m] ² (dry weight solid content) by an air knife coater Subsequently, after coating and desiccation, Coating and desiccation of were done and the ink absorbing layer was established in both sides so that a coating amount might serve as 7.5 g/m² (dry weight solid content) in another field.

[0041] It was considered as the 1% of compound (number of m+n= ethyleneoxide

addition mols of 10 mol) solution of the formation 5 of the example 1 above. Subsequently, coating and after drying, super calender processing was carried out and the ink jet recording sheet in which double-sided printing is possible was obtained, so that a double-sided coating amount might serve as 1.5 g/m² (dry weight solid content) by gate roll coater in this solution to ink absorbing layer both sides acquired above.

[0042]It was considered as the 1% of compound (number of m+n= ethyleneoxide addition mols of 10 mol) solution of the formation 6 of the example 2 above. Subsequently, coating and after drying, super calender processing was carried out and the ink jet recording sheet in which double-sided printing is possible was obtained, so that a double-sided coating amount might serve as 1.5 g/m² (dry weight solid content) by gate roll coater in this solution to ink absorbing layer both sides acquired above.

[0043]It was considered as the 1% of compound (number of m+n= ethyleneoxide addition mols of 3 mol) solution of the formation 6 of the example 3 above. Subsequently, coating and after drying, super calender processing was carried out and the ink jet recording sheet in which double-sided printing is possible was obtained, so that a double-sided coating amount might serve as 1.5 g/m² (dry weight solid content) by gate roll coater in this solution to ink absorbing layer both sides acquired above.

[0044]It was considered as the 1% of compound (number of m+n= ethyleneoxide addition mols of 30 mol) solution of the formation 6 of the example 4 above. Subsequently, coating and after drying, super calender processing was carried out and the ink jet recording sheet in which double-sided printing is possible was obtained, so that a double-sided coating amount might serve as 1.5 g/m² (dry weight solid content) by gate roll coater in this solution to ink absorbing layer both sides acquired above.

[0045]It was considered as the 1% of compound solution of the formation 10 of the example 5 above. Subsequently, coating and after drying, super calender processing was carried out and the ink jet recording sheet in which double-sided printing is possible was obtained, so that a double-sided coating amount might serve as 1.5 g/m² (dry weight solid content) by gate roll coater in this solution to ink absorbing layer both sides acquired above.

[0046]It was considered as the 1% of compound solution of the formation 14 of the example 6 above. Subsequently, coating and after drying, super calender processing was carried out and the ink jet recording sheet in which double-sided printing is possible was obtained, so that a double-sided coating amount might serve as 1.5 g/m² (dry weight solid content) by gate roll coater in this solution to ink absorbing layer both sides acquired above.

[0047]It was considered as the 1% of compound solution of the formation 18 of the

example 7 above. Subsequently, coating and after drying, super calender processing was carried out and the ink jet recording sheet in which double-sided printing is possible was obtained, so that a double-sided coating amount might serve as 1.5 g/m² (dry weight solid content) by gate roll coater in this solution to ink absorbing layer both sides acquired above.

[0048]The ink absorbing layer was established in both sides of comparative example 1 Example 1, super calender processing of the sheet of a request was carried out, and the ink jet recording sheet in which double-sided printing is possible was obtained.

[0049]The ink jet recording sheet in which double-sided printing is possible was obtained in the similar way except having transposed the 1% of compound solution of the above-izing 5 of comparative example 2 Example 1 to water.

[0050]

Comparative example 3 [Production of a base material]

10 copies of 90 copies of LBKP(s)(CSF350ml) NBKP(s) (CSF350ml) talc (the whiteness degree of 88%, mean particle diameter of 11-46 micrometers, oil absorption 39g/100g)

20-copy 50% rosin size emulsion Four-copy 50% sulfuric acid band solution Five-copy both sexes starch Two copies[0051]After milling the 1% slurry of the above-mentioned combination, size press was performed so that it might become double-sided coating weight 0.5 g/m² (dry weight solid content) in oxidized starch (Japan Maize Products make: MS-3800) solution 3%, and the base material of basis weight 200 g/m² was obtained.

[Production of an ink absorbing layer] A coating amount the coating liquid for ink absorbing layers obtained in Example 1 so that it may become one side of the base material of basis weight 200 g/m² of ** in talc obtained above with 7.5 g/m² (dry weight solid content) by an air knife coater Subsequently, after coating and desiccation, After coating and desiccation, super calender processing was carried out and the ink jet recording sheet in which double-sided printing is possible was obtained so that a coating amount might serve as 7.5 g/m² (dry weight solid content) in another field.

[0052]To ink absorbing layer both sides acquired by the comparative example 4 comparative example 3, by gate roll coater, coating and after drying, super calender processing of the water was carried out, and the ink jet recording sheet in which double-sided printing is possible was obtained.

[0053]The following method measured and estimated the ink jet recording sheet in which the double-sided printing obtained by Example 1 - Example 7 and the comparative example 1 - the comparative example 4 is possible.

[0054]both sides of a valuation method <<printing nonuniformity>> sheet -- a card

printer (Canon P400CII) -- cyanogen 100%+ magenta 100% -- the visual judgment of the printing nonuniformity state when color overlapping solid printing is carried out was carried out.

O Seal : printing nonuniformity does not have both sides and it is high-definition.

** seal: Although both sides have slight printing nonuniformity, it is a level which is satisfactory practically.

x seal: Both sides have printing nonuniformity and it is not practical.

<<Opacity>> One sheet measured to the standard black plate of a hunter type color comparator is piled up, and is placed, and it asks for the reflectance of white light from the sheet side, and is considered as R_0 . Subsequently, one sheet measured to a standard white plate was piled up, and was placed, and it asked for the reflectance of white light from the sheet side, and it was referred to as R and the opacity C was searched for from the following formula. It expresses that the one of opacity where a numerical value is larger is high.

[0055]

[Equation 1]

$$\text{不透明度 } C = \frac{R_0}{R} \times 100 (\%)$$

[0056]<<Set-off of a printing image>> After printing the pattern for set-off evaluation on one side of a sheet, it viewed from another field and the set-off degree of the printing image was judged.

O Seal : the set-off of a printing image does not have both sides, and excel.

x seal: In both sides, a printing image appears palely, and practicality is missing.

<<ink absorbency>> -- both sides of a sheet -- a card printer (Canon P400CII) -- cyanogen 100%+ magenta 100% -- the number of seconds until the ink which carried out color overlapping solid printing will permeate an ink absorbing layer and will be in dryness apparently was measured.

O Seal : it will be in dryness almost simultaneously [both sides] with printing.

x seal: It is 10 seconds or more until both sides will be in after-printing dryness, and it is not practical.

<<Printing density>> The optical density of the solid picture of the black printed with the card printer (Canon P400CII) to both sides of the sheet was measured by Macbeth densimeter RD918. It is shown that concentration is highly excellent in the one where a numerical value is larger.

[0057]<<Blot of a printing image>> The visual judgment of the pattern for blot

evaluation printed with the card printer (Canon P400CII) to both sides of the sheet was carried out.

O Seal : both sides do not have a blot and excel dramatically.

x seal: A blot occurs and both sides are not practical.

[0058]The above evaluation result was collectively shown in Table 1 and Table 2. The overall evaluation means the following thing.

O Seal : both sides are dramatically excellent practical.

x seal: Both sides are not practical.

[0059]

[Table 1]

	印字ムラ	不透明度	印字画像 の裏移り	インク 吸収性	印字濃度 オモテ面	ブラック ウラ面
実施例 1	○	97.6	○	○	1.67	1.69
2	○	97.5	○	○	1.65	1.68
3	○	97.6	○	○	1.68	1.68
4	○	97.6	○	○	1.67	1.69
5	○	97.6	○	○	1.65	1.67
6	○	97.7	○	○	1.67	1.68
7	○	97.6	○	○	1.66	1.67
比較例 1	×	97.6	○	×	1.64	1.63
2	×	97.5	○	×	1.64	1.65
3	△	94.6	×	×	1.59	1.61
4	△	94.5	×	×	1.61	1.62

[0060]

[Table 2]

	印字画像 の滲み	総合評価		印字画像 の滲み	総合評価
実施例 1	○	○	比較例 1	×	×
2	○	○	2	×	×
3	○	○	3	×	×
4	○	○	4	×	×
5	○	○			
6	○	○			
7	○	○			

[0061]

[Effect of the Invention]Like [it is ***** from the above example and], according to this invention, there is no printing nonuniformity, ink absorbency also improved sharply, and the high-definition picture without a picture blot was acquired.

Abstract:

PROBLEM TO BE SOLVED: To provide a high grade ink jet recording sheet, with which no uneven printing develops, which is excellent in ink absorbency and with which a clear printing image is obtained.

SOLUTION: In the perfectible ink jet recording sheet produced by providing an ink accepting layer mainly made of a white pigment on both the sides of a sheet-like support filled internally with a calcined kaolin, specified acetylene glycol derivatives or alkali metal salts of a specified dialkyl sulfosuccinate are simultaneously coated on both the sides of the ink accepting layer.